

ABSTRACT

A switched current temperature sensing circuit (1) comprises a measuring
 5 transistor (Q1) which is located remotely of a measuring circuit (5) which applies
 three excitation currents (I_1, I_2, I_3) of different values to the measuring transistor
 (Q1) in a predetermined current sequence along lines (10,11). Resulting
 base/emitter voltages from the measuring transistor (Q1) are applied to the
 measuring circuit (5) along the same two lines (10,11) as the excitation currents are
 10 applied to the measuring transistor (Q1). Voltage differences ΔV_{be} of successive
 base/emitter voltages resulting from the excitation currents are integrated in an
 integrating circuit (36) of the measuring circuit (5) to provide an output voltage
 indicative of the temperature of the measuring transistor (Q1). By virtue of the fact
 that the measuring transistor (Q1) is excited by excitation currents of three different
 15 values, the effect of current path series resistance in the lines (10,11) on the output
 voltage indicative of temperature is eliminated. The predetermined current
 sequence in which the excitation currents are applied to the measuring transistor
 (Q1) is selected to minimize the voltages in the integrating circuit (36) during
 integration of the voltage differences ΔV_{be} .

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